

IN THE SPECIFICATION:

Please replace the following paragraphs:

Page 1, lines 17-21:

B<sub>1</sub> The isolation of whey proteins is complicated by their good solubility, which cannot be affected by change of pH at pH values 2 -9 whilst the proteins are in their native form. Proteins may be isolated according to four principal methods: 1. denaturation by heat and precipitation, 2. ultrafiltration, 3. ion ~~exchange~~ exchange, and 4. chemical modification and precipitation.

Page 1, lines 27-31:

B<sub>2</sub> Nowadays whey proteins are isolated mainly as protein concentrate by using ultrafiltration and drying or as protein isolate by using ion ~~exchange~~ exchange adsorption techniques and drying. Both methods allow for isolation of functional proteins. The decisive factor when choosing between these production methods is functionality of the recovered product and its production costs.

Page 2, lines 3-13:

B<sub>3</sub> Even in protein isolates there are variations of various properties due to the factors described above. The ion ~~exchange~~ exchange adsorption method used in their production evens out the variation somewhat, and gives eventually a product that differs in composition from the protein concentrate obtained by ultrafiltration. It has been noted that the isolates have clearly better quality and functional properties than the concentrates in terms of the protein and fat content as well as the protein's solubility, foaming expansion and stability, absence of protein denaturation and aggregation as well as flavor. The relatively high lactose and mineral content as well as poor flavor of the concentrates are factors that limit their use by the food industry. The utility of whey protein isolates is in spite of their good properties limited by high product cost due to the method of production.

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Page 2, lines 14-17:

B<sub>4</sub> It is also well known that by changing the protein structure by chemical reaction one can affect the molecule's spatial structure/conformation, charge and ~~hydrofobicity~~ hydrophobicity and thus even some other properties of the protein such as its solubility, viscosity, foaming and emulsification.

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Page 7, lines 25-32:

B<sub>5</sub> From the point of view of precipitation based on pH, the whey or soy proteins sulfonated by sulfitolysis need not be oxidized which renders continuation of sulfonation in order to sulfonate all sulfhydryl groups liberated in sulfitolysis ~~unnecessary~~ unnecessary. The oxidative sulfitolysis, i.e. sulfitolysis and oxidization, is a useful method when the situation and circumstances call for sulfonation of both sulfur atoms of the cleaved disulfide bonds.

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Page 12, lines 23-28:

B<sub>6</sub> By all the important parameters of sulfitolysis, i.e. the protein concentration of protein concentrate, the amount of sulfite, reaction temperature and reaction pH in various stages plus reaction times applied at various stages the implementation of ~~var-ious~~ various partial reactions of the isolation process can be influenced as may be the end result of the process as a whole, i.e. the amount of protein, their composition and the properties desired therefor in the fractions to be isolated.

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Page 16, line 32 – page 17, line 2:

B<sub>7</sub> The pH of the precipitate was lowered to 2.0 with HCl and the sulfur dioxide liberated was blown out; thereafter pH was raised to 5.0 and mixture blown again in order to oxidize the small amount of sulfite remaining to sulfate as described in ~~examl~~ example 6. Finally this fraction was washed by ultrafiltration to reduce lactose and salt content and was concentrated to protein concentration of 10 %.

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